

### III. REMARKS

In the Office Action, Claim 4 was rejected under 35 U.S.C. 112, first paragraph, for reasons set forth in the Action. Claim 4 is amended to conform the claim to the teaching of the specification by adopting the examiner's suggestion at the end of the first paragraph on page 2 of the Action, thereby to overcome this ground of rejection.

Claims 1-3, 5, 8, 9, 11-17, and 19-23 were rejected under 35 U.S.C. 103 as being unpatentable over Richardson (US 5,369,637) in view of Marshall (US 5,502,744) for reasons set forth in the Action, these grounds of rejection being raised previously in the prior Office Action.

The claims are amended to provide for a further distinction between the present invention, as claimed, and the teachings of the cited art of Richardson taken in combination with Marshall. The claims, as amended, are believed to be allowable in view of the following argument.

In accordance with a feature of the invention (present specification, page 2 at lines 10-14), there is a first channel to provide management functions for the broadcast link and the time division multiple access link, and a second channel to operate at high data rates and to meet the bandwidth requirements of individual remote nodes of the communication system. Further (page 4 at lines 6-10), in conjunction with Fig. 4, there is a teaching of a broadcast link 40 used by the central node, and a communication link 50 used by a remote node 30. Further detail is provided on page 7 wherein the

specification teaches (lines 9-14) that one channel can operate at a lower data rate to achieve a high signal-to-noise ratio (SNR) that is robust and jam resistant, while the remaining channels can provide a wideband conduit for conveying high speed user data from the remote node 30 to the central node 20. The high SNR channel (lines 19-27), because of its robustness, can provide slot timing and link synchronization, while the wideband channels are free to be tailored to the bandwidth needs of remote nodes and can operate at much higher data rates than the high SNR channel.

The foregoing features of the present invention are not taught in the combination of teachings of Richardson in view of Marshall, relied upon by the examiner.

As noted in the previous response, Richardson does not teach the concept of a separate radio link for controlling operations of the channels of the main communications link. In Col. 1 at lines 30-35, Richardson discloses the benefit of having different transmission rates to adapt the transmission system to the needs of the users. This concept is emphasized further in Col. 1 at lines 50-68, and in Col. 3 at lines and 49-55. This concept is also carried forward by Richardson in his claims 4, 5 and 12. It appears that Richardson does not advocate the use of a lower-frequency transmission for a control channel.

Marshall breaks up a speech signal into significant bits (significant in the sense that they are most important for intelligence in understanding the speech) and less significant bits (less significant in the sense that they have diminished importance for intelligence in understanding the speech). This is disclosed in Col. 1 at lines 48-60. Then, in the interest of improving transmission speed, Marshall transmits the less

significant bits at a higher data rate, while retaining a smaller data rate for a more reliable transmission of the more significant bits.

The technique of Marshall in discriminating between more significant bits and less significant bits is used in data transmission wherein, in some applications, the less significant bits may be dropped from the transmission altogether, or may be rounded off to provide for a reduced quantity of bits to be transmitted. Marshall's outlook is to transmit all of the bits, but to transmit the less significant bits at a higher rate even though errors may occur in such rapid transmission due to lower signal-to-noise ratio.

The previous response presented the argument that there is no suggestion in Marshall of a mode of construction of a broadcast link for controlling communications among traffic links of a communications system. However, in the present Office Action, the examiner disagrees (Point 2 of the Action) and points to a system controller function of Marshall.

In order to distinguish the present claims further from the teachings of the cited art, independent claims 1, 12 and 17 are amended to include the above-noted features of the present invention dealing with the higher SNR but lower bandwidth channel for control, and the lower SNR but wider bandwidth channel for data transmission. For example, amended claim 1 recites a first channel operating at a lower data rate to achieve high SNR and a second channel providing bandwidth on demand for user data. Claim 1 states further that the second channel is capable of operating at a higher data rate and lower SNR than the first channel, and that the central node provides slot timing and link synchronization via the first channel.

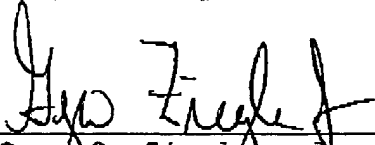
Corresponding subject matter appears in amended independent claims 12 and 17. Therefore, the independent claims and their respective dependent claims are believed to be distinguishable from the teachings of the cited art.

It is urged that the combination of the teachings of Richardson in view of Marshall do not teach or suggest the present invention as set forth in the amended claims. Accordingly, this response is believed to overcome the rejections under 35 U.S.C. 103 so as to obtain allowable subject matter in the present claims.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,



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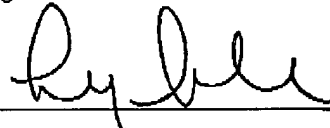
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